

## CLAIMS:

1. An image conversion unit for converting a first image with a first resolution into a second image with a second resolution, the second resolution being higher than the first resolution, characterized in that the image conversion unit is arranged to add noise to the second image.

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2. An image conversion unit as claimed in claim 1, characterized in comprising a noise generator which is arranged to generate the noise and that the noise comprises spectral components that are in a part of a frequency spectrum that is above the Nyquist frequency of the first image.

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3. An image conversion unit as claimed in claim 2, characterized in that the noise generator is arranged to generate colored noise.

4. An image conversion unit as claimed in claim 3, characterized in that the noise generator is arranged to generate colored noise that comprises further spectral components which are in another part of the frequency spectrum which is below the Nyquist frequency of the first image, the total energy of the spectral components being higher than the total energy of the further spectral components.

5. An image conversion unit as claimed in claim 1, characterized in that the amount of noise that is added is based on a noise measurement.

6. An image conversion unit as claimed in claim 1, characterized in comprising a spatial enhancement filter for enhancing structures of an intermediate image which is based on the first image and which has the second resolution, the enhancing resulting into the second image.

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7. A method of converting a first image with a first resolution into a second image with a second resolution, the second resolution being higher than the first resolution, characterized in that noise is added to the second image.

5 8. An image processing apparatus comprising:  
- receiving means for receiving a signal corresponding to a first image; and  
- the image conversion unit for converting the first image into a second image,  
as claimed in claim 1.

10 9. An image processing apparatus as claimed in claim 8, characterized in further comprising a display device for displaying the second image.

10. A TV comprising an image processing apparatus as claimed in claim 9.